Virgin Islands monuments move forward

By Cliff McCreedy

ON FEBRUARY 27, 2003, Secretary of the Interior Gale A. Norton announced that regulations to protect the new Virgin Islands Coral Reef National Monument and the expanded Buck Island Reef National Monument will go forward. Her statement at the U.S. Coral Reef Task Force meeting in Washington, D.C., marked a critical change in management and protection of coral reefs in the Virgin Islands parks. The new monuments were created in 2001 to restore these coral reef ecosystems and replenish fish and shellfish populations. Designed to be managed as fully protected marine reserves, the monuments finally became effective with Secretary Norton's announcement and promulgation of regulations in May 2003.

"Years of tenacious scientific work and careful legal and policy research culminated in the long-overdue realization of these promising new reserves."

"The conservation of our coral reefs is a high priority at the Interior Department," Secretary Norton said. "These 'rain forests of the sea' are not only breathtaking but they are also storehouses of immense biological wealth. We will be protecting them against damage by careless boat anchoring and all extractive uses except some traditional fishing."

The new 12,708-acre (5,147-ha) Virgin Islands Coral Reef National Monument was established to increase protection of marine resources located near the Virgin Islands National Park on St. John, while the Buck Island Reef National Monument on St. Croix was expanded from 880 acres (356 ha) to more than 19,000 acres (7,695 ha). The Buck Island expansion area includes additional coral reefs (patch, spur and groove, deep and wall) and the unusual "haystacks" of elkhorn coral that support endangered sea turtles and a high diversity of marine life and that attract tour boats to the snorkel trail. The Virgin Islands Coral Reef National Monument has both bank and spur-and-groove reef formations, mangrove shorelines, hardbottom habitat, and seagrass beds. Recreational boating, snorkeling, and scuba-diving are encouraged, but anchoring requires a permit at Buck Island Reef and is not allowed at Virgin Islands Coral Reef National Monument. Fishing for blue runner and baitfish in limited portions of Virgin Islands Coral Reef National Monument is the only form of fishing allowed.

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Massive branches characterize elkhorn coral (*Acropora palmata*), an ecologically important marine species in national parks of the Caribbean Sea. Created in 2001, the new Virgin Islands Coral Reef National Monument and the expanded Buck Island Reef National Monument will help restore coral reef ecosystems and replenish fish and shellfish populations.

new reserves. That fish, lobster, and conch populations had diminished to alarming levels was not in doubt. Studies by park staff and U.S. Geological Survey (USGS) scientists had contributed greatly to understanding how fishery resources and reef fish assemblages had declined dramatically from overfishing, illegal harvest, and ongoing mortality from discarded fish nets and traps. Two recent joint studies by Dr. Caroline Rogers of the USGS and Dr. Jim Beets of Jacksonville University identified low biomass and low numbers of species and individuals of finfish and shellfish. Ironically, Rogers and Beets reached the conclusion that species composition and numbers of fish, lobsters, and conch are no greater inside Virgin Islands National Park, where one would expect greater species protection, than outside park boundaries.

Scientific collaborations and interagency partnerships will continue to be critically important to park managers in evaluating the efficacy and performance of the recently created reserves. For example, Buck Island Reef and scientists with the National Oceanic and Atmospheric Administration's (NOAA) National Center for Coastal and Ocean Science Biogeography Program have been collaborating since January 1999 to map and document benthic habitats and marine species in the existing and expanded Buck Island Reef area. They will intensify their work, using a NOAA research vessel (March 2004), equipment, and scientists, with additional funding from the NPS Natural Resource Preservation Program beginning in FY 2005. Virgin Islands Coral Reef National Monument plans similar surveys of fish and invertebrate populations. These efforts will evaluate coral health, document previously harvested species of fish and marine invertebrates, and shed light on their possible recovery in the reserves.

All the Virgin Islands parks are highly popular destinations for tourists to enjoy beautiful landscapes above and below water. Each is developing general management plans (GMPs) beginning in 2004. Development of GMPs and outreach and education will be critical to designing the shared future of these parks in collaboration with fishers, local communities, the tourism industry, and the Virgin Islands territorial government. ■

cliff_mccreedy@nps.gov
Marine Management Specialist, Water Resources Division; Washington, D.C.

National park research engages future scientists participating in *JASON XIV: From Shore to Sea*

By Yvonne Menard

STUDENTS FROM AROUND THE WORLD went on a virtual science expedition to the California Channel Islands in 2003 with world-renowned oceanographer and explorer Dr. Robert Ballard. Known as *JASON XIV: From Shore to Sea*, the year-long study adventure highlighted research and science at Channel Islands National Park and National Marine Sanctuary, and more than 1.6 million middle and elementary school students and 35,000 teachers participated.

Ballard started the JASON Project in 1989 after receiving more than 16,000 requests from students who asked to go with him on his next expedition following the RMS *Titanic* discovery. The JASON Project, designed to engage students in science and technology, has been proven to motivate them to take a greater interest in scientific careers. Its multimedia components include a standards-based curriculum, interactive live satellite broadcasts, hands-on field research, professional development for teachers, classroom exercises, and an award-winning website.

During *JASON XIV*, students used cutting-edge technology to discover the marine and terrestrial ecosystems, geology, archeology, and cultural history of the Channel Islands. The national park became a living laboratory, a setting to stimulate young minds, a place to engage in research.

Students from around the globe interacted via a two-way satellite link with researchers on Anacapa Island and at the Santa Barbara Maritime Museum. During two weeks in December and January they participated in more than 55 live satellite broadcasts, at least one of which was aired daily on the National Geographic Channel. Through the broadcasts students in the classroom had the opportunity to monitor urchins in the kelp forest, study a recovering island ecosystem, and immerse in the traditions of the native Chumash.

Addressing JASON Argonauts worldwide, guest researcher Jean-Michel Cousteau recounts the technological advances in diving equipment that have allowed scientists to gain a better understanding of ocean resources and direct conservation efforts.